

CLAIMS

What is claimed is:

1. An asphalt seam heater comprising:

an articulated frame movable between a collapsed position and an extended position;

a main wheel assembly attached to the frame and movable between a support position wherein the main wheel assembly supports the frame and enables the asphalt seam heater to be towed behind a towing vehicle when the articulated frame is in the collapsed position, and a retracted position wherein the main wheel assembly does not support the frame;

at least one heater disposed within and supported by the frame, the heater comprising:

a housing having an upper chamber and a lower chamber;

a gas-permeable refractory material disposed in the housing to define a closed upper chamber and an open-ended lower chamber;

a fuel line for introducing a combustible fuel-air mixture in to the upper chamber;

a venturi disposed between the fuel line and the upper chamber; and

an igniter disposed in the lower chamber, wherein fuel introduced into the upper chamber diffuses through the gas-permeable refractory material and into the lower chamber, where it is ignited by the igniter.

2. The asphalt seam heater of claim 1, further comprising a guide wheel assembly attached to the frame and movable between a retracted position wherein the guide wheel assembly does not support the frame, and an extended position wherein the guide wheel assembly supports the frame.

3. The asphalt seam heater of claim 1, further comprising a trailer tongue attached to the frame, the trailer tongue dimensioned and configured to attach the frame to a towing vehicle when the frame is in the collapsed position.

4. The asphalt seam heater according to claim 1, further comprising a manifold disposed within the upper chamber of the heater and operationally connected to the venturi.

5. The asphalt seam heater of claim 1, wherein the articulated frame comprises two sub-frames, each sub-frame being a mirror image of the other and comprising a first end and a second end, and wherein the two sub-frames are pivotally connected at their respective first ends.

6. The asphalt seam heater of claim 5, wherein each sub-frame includes a corresponding main wheel assembly attached to it at a point proximate to the first end of each sub-frame.

7. The asphalt seam heater of claim 6, wherein each sub-frame includes a corresponding guide wheel assembly attached to it at a point proximate to the second end of each sub-frame.

8. The asphalt seam heater according to claim 7, further comprising a manifold disposed within the upper chamber of the heater and operationally connected to the venturi.

9. An asphalt seam heater comprising:

an articulated frame movable between a collapsed position and an extended position, the frame comprising two sub-frames, each sub-frame being a mirror image of the other and comprising a first end and a second end, and wherein the two sub-frames are pivotally connected at their respective first ends;

a main wheel assembly attached to each sub-frame at a point proximate to the first end of each sub-frame, each main wheel assembly movable between a support position wherein the main wheel assembly supports its respective sub-frame and enables the asphalt seam heater to be towed behind a towing vehicle when the articulated frame is in the collapsed position, and a retracted position wherein the main wheel assembly does not support its respective sub-frame;

at least one heater disposed within and supported by one of the sub-frames, the heater comprising:

a housing having an upper chamber and a lower chamber;

a gas-permeable refractory material disposed in the housing to define a closed upper chamber and an open-ended lower chamber;

a fuel line for introducing a combustible fuel-air mixture in to the upper chamber;

a venturi disposed between the fuel line and the upper chamber; and

an igniter disposed in the lower chamber, wherein fuel introduced into the upper chamber diffuses through the gas-permeable refractory material and into the lower chamber, where it is ignited by the igniter.

10. The asphalt seam heater of claim 9, wherein each sub-frame includes a corresponding guide wheel assembly attached to it at a point proximate to the second end of each sub-frame, each guide wheel assembly movable between a retracted position wherein the guide wheel assembly does not support its respective sub-frame, and an extended position wherein the guide wheel assembly supports its respective sub-frame.

11. The asphalt seam heater according to claim 9, further comprising a manifold disposed within the upper chamber of the heater and operationally connected to the venturi.

12. The asphalt seam heater of claim 9, further comprising a trailer tongue attached to the frame, the trailer tongue dimensioned and configured to attach the frame to a towing vehicle when the frame is in the collapsed position.

13. An asphalt seam heater comprising:

an articulated frame movable between a collapsed position and an extended position, the frame comprising two sub-frames, each sub-frame being a mirror image of the other and comprising a first end and a second end, and wherein the two sub-frames are pivotally connected at their respective first ends;

a main wheel assembly attached to each sub-frame at a point proximate to the first end of each sub-frame, each main wheel assembly movable between a support position wherein the main wheel assembly supports its respective sub-frame and enables the asphalt seam heater to be towed behind a towing vehicle when the articulated frame is in the collapsed position, and a retracted position wherein the main wheel assembly does not support its respective sub-frame;

a guide wheel assembly attached to each sub-frame at a point proximate to the second end of each sub-frame, each guide wheel assembly movable between a retracted position wherein the guide wheel assembly does not support its respective sub-frame, and an extended position wherein the guide wheel assembly supports its respective sub-frame;

at least one heater disposed within and supported by one of the sub-frames, the heater comprising:

a housing having an upper chamber and a lower chamber;

a gas-permeable refractory material disposed in the housing to define a closed upper chamber and an open-ended lower chamber;

a fuel line for introducing a combustible fuel-air mixture in to the upper chamber;

a venturi disposed between the fuel line and the upper chamber;

a manifold disposed within the upper chamber of the heater and operationally connected to the venturi; and

an igniter disposed in the lower chamber, wherein fuel introduced into the upper chamber diffuses through the gas-permeable refractory material and into the lower chamber, where it is ignited by the igniter.

14. The asphalt seam heater of claim 13, further comprising a trailer tongue attached to the frame, the trailer tongue dimensioned and configured to attach the frame to a towing vehicle when the frame is in the collapsed position.